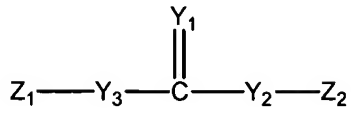
What is claimed is:

1. A compound having the formula:

(I)



wherein:

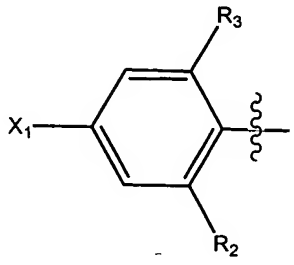
Y_{1-3} are independently O, S or NR_1;

Z_1 and Z_2 are independently selected substituted or unsubstituted aromatic hydrocarbons or substituted or unsubstituted heterocyclic aromatic groups containing an aldehyde or protecting group, and

R_1 is selected from the group consisting of hydrogen, C_{1-6} alkyls, C_{3-12} branched alkyls, C_{3-8} cycloalkyls, C_{1-6} substituted alkyls, C_{3-8} substituted cycloalkyls, aryls, substituted aryls, aralkyls, C_{1-6} heteroalkyls, substituted C_{1-6} heteroalkyls, C_{1-6} alkoxys, phenoxys and C_{1-6} heteroalkoxys.

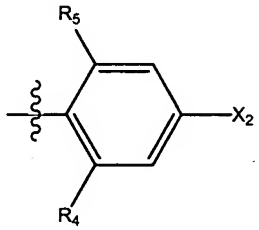
2. The compound of claim 1, wherein

Z_1 is



and

Z_2 is

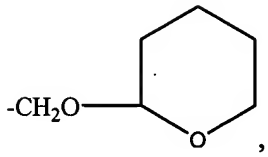


wherein:

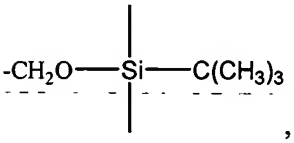
X_1 and X_2 are independently selected from the group consisting of

-CHO,

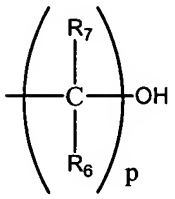
$-NO_2$,



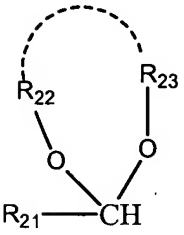
,



,



and



wherein

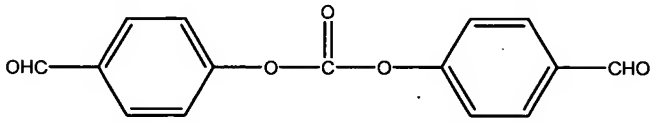
$R_{2\text{-}7}$ and R_{21} are independently selected from the group consisting of hydrogen, $C_{1\text{-}6}$ alkyls, $C_{3\text{-}12}$ branched alkyls, $C_{3\text{-}8}$ cycloalkyls, $C_{1\text{-}6}$ substituted alkyls, $C_{3\text{-}8}$ substituted cycloalkyls, aryls, substituted aryls, aralkyls, $C_{1\text{-}6}$ heteroalkyls, substituted $C_{1\text{-}6}$ heteroalkyls, $C_{1\text{-}6}$ alkoxys, phenoxys and $C_{1\text{-}6}$ heteroalkoxys;

R_{22} and R_{23} are selected from the same group which defines R_2 and optionally together form a heterocyclic group; and

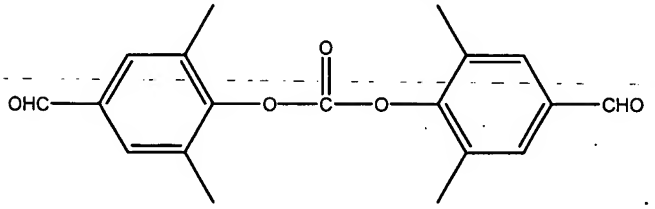
p is a positive integer.

3. The compound of claim 2 wherein, Y_{1-3} are each O, R_{3-6} are independently one of hydrogen or a C_{1-6} alkyl, and Z_2 is the same as Z_1.

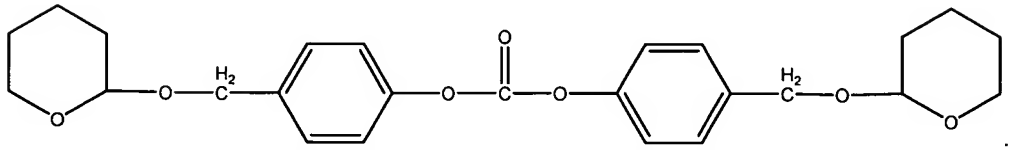
4. The compound of claim 1 having the formula:



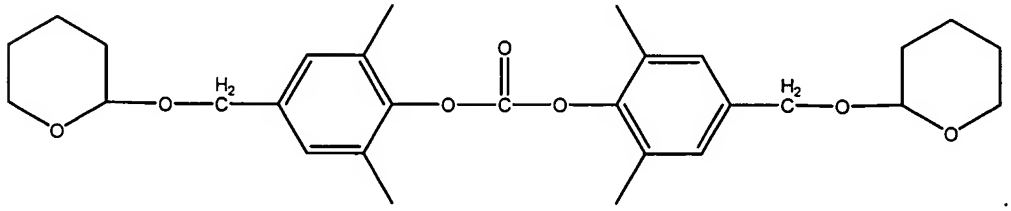
5. The compound of claim 1 having the formula:



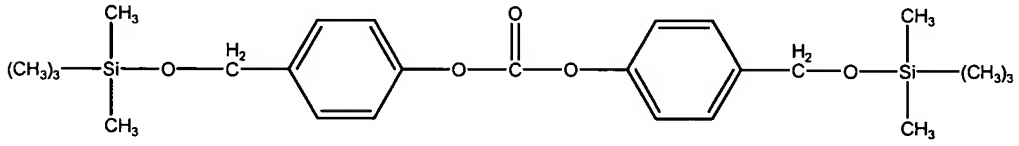
6. The compound of claim 1 having the formula:



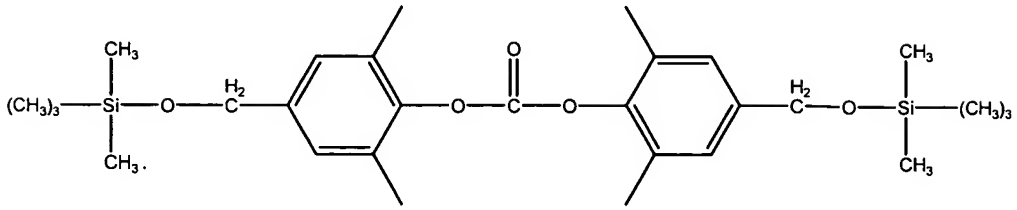
7. The compound of claim 1 having the formula:



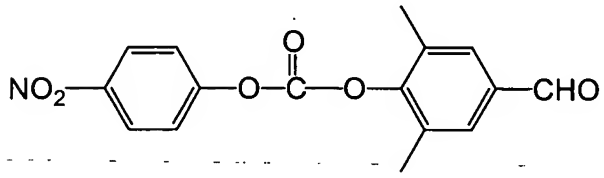
8. The compound of claim 1 having the formula:



9. The compound of claim 1 having the formula:

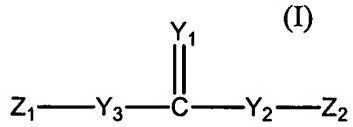


or



10. A method of preparing an activated nucleophile, comprising:

a) reacting a compound having the formula:



(I)

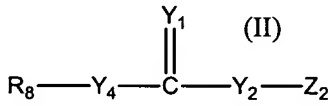
wherein:

Y_{1-3} are independently O, S or NR_1;

Z_1 and Z_2 are independently selected substituted or unsubstituted aromatic hydrocarbons or substituted or unsubstituted heterocyclic aromatic groups containing an aldehyde or protecting group; and

R_1 is selected from the group consisting of hydrogen, C_{1-6} alkyls, C_{3-12} branched alkyls, C_{3-8} cycloalkyls, C_{1-6} substituted alkyls, C_{3-8} substituted cycloalkyls, aryls, substituted aryls, aralkyls, C_{1-6} heteroalkyls, substituted C_{1-6} heteroalkyls, C_{1-6} alkoxys, phenoxys and C_{1-6} heteroalkoxys;

with a strong nucleophile under conditions sufficient to form a compound of formula (II):



(II)

wherein:

R_8 is a residue of a strong nucleophile;

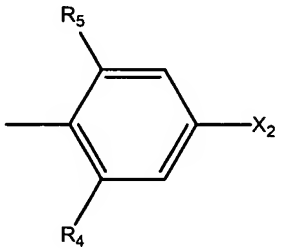
Y_4 is NR_{20}, O or S;

Y_{1-2} are independently O, S or NR_1;

Z_2 is a substituted or unsubstituted aromatic hydrocarbon or substituted or unsubstituted heterocyclic aromatic group containing an aldehyde or protecting group; and

R_1 and R_{20} are independently selected from the group consisting of hydrogen, C_{1-6} alkyls, C_{3-12} branched alkyls, C_{3-8} cycloalkyls, C_{1-6} substituted alkyls, C_{3-8} substituted cycloalkyls, aryls, substituted aryls, aralkyls, C_{1-6} heteroalkyls, substituted C_{1-6} heteroalkyls, C_{1-6} alkoxys, phenoxys and C_{1-6} heteroalkoxys.

11. The method of claim 10, wherein Z_2 is:



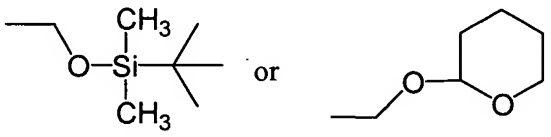
wherein:

R_{4-5} are independently selected from the group consisting of hydrogen, C_{1-6} alkyls, C_{3-12} branched alkyls, C_{3-8} cycloalkyls, C_{1-6} substituted alkyls, C_{3-8} substituted cycloalkyls, aryls, substituted aryls, aralkyls, C_{1-6} heteroalkyls, substituted C_{1-6} heteroalkyls, C_{1-6} alkoxys, phenoxys and C_{1-6} heteroalkoxys; and

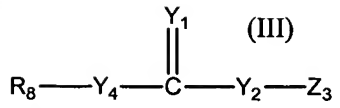
X_2 is an aldehyde or protecting group.

12. The method of claim 11, wherein X_2 is CHO.

13. The method of claim 11, wherein X_2 is

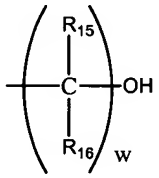


14. The method of claim 10, further comprising converting X_2 to an alcohol and thereby forming a compound of the formula:



(III)

wherein Z_3 is substituted or unsubstituted aromatic hydrocarbon or substituted or unsubstituted heterocyclic aromatic group substituted with



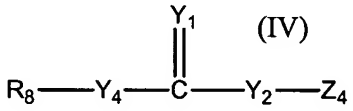
wherein

R_{15-16} are independently selected from the group consisting of hydrogen, C_{1-6} alkyls, C_{3-12} branched alkyls, C_{3-8} cycloalkyls, C_{1-6} substituted alkyls, C_{3-8} substituted cycloalkyls, aryls, substituted aryls, aralkyls, C_{1-6} heteroalkyls, substituted C_{1-6} heteroalkyls, C_{1-6} alkoxys, phenoxys and C_{1-6} heteroalkoxys; and

w is a positive integer.

15. The method of claim 14, wherein p is 1.

16. The method of claim 14, further comprising reacting said compound of formula (III) with a moiety containing a leaving group under conditions sufficient to form an activated polymer of the formula:



(IV)

wherein

R_8 is a residue of a strong nucleophile;

Y_4 is NR_{20}, O or S;

Y_{1-2} are independently O, S or NR_1;

R_1 and R_{20} are independently selected from the group consisting of hydrogen, C_{1-6} alkyls, C_{3-12} branched alkyls, C_{3-8} cycloalkyls, C_{1-6} substituted alkyls, C_{3-8} substituted cycloalkyls, aryls, substituted aryls, aralkyls, C_{1-6} hetero-

alkyls, substituted C_{1-6} heteroalkyls, C_{1-6} alkoxys, phenoxys and C_{1-6} heteroalkoxys; and

Z_4 is a leaving group.

17. The method of claim 16, wherein said moiety containing a leaving group is selected from the group consisting of disuccinimidyl carbonate and *N*-hydroxypthalamide.

18. The method of claim 10, wherein R_8 comprises a polyalkylene oxide residue.

19. The method of claim 18, wherein R_8 is a polyethylene glycol residue.

20. The method of claim 18, wherein R_8 comprises $-O-(CH_2CH_2O)_x$ and x is the degree of polymerization.

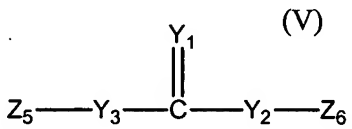
21. The method of claim 18, wherein R_8 has a weight average molecular weight of from about 20,000 to about 100,000.

22. The method of claim 10, wherein R_8 has a weight average molecular weight of from about 25,000 to about 60,000.

23. The method of claim 16, further comprising reacting the activated polymer of formula IV with a biologically active compound to form a polymer conjugate.

24. A method of preparing an activated nucleophile, comprising:

a) reacting a compound having the formula:

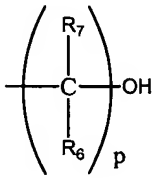


(V)

wherein:

Y_{1-3} are independently O, S or NR_1;

Z_5 and Z_6 are independently selected substituted or unsubstituted aromatic hydrocarbons or substituted or unsubstituted heterocyclic aromatic groups, substituted with

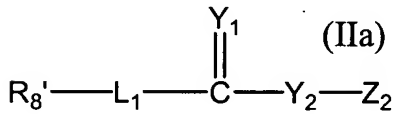


wherein

R_1 and R_{6-7} are independently selected from the group consisting of hydrogen, C_{1-6} alkyls, C_{3-12} branched alkyls, C_{3-8} cycloalkyls, C_{1-6} substituted alkyls, C_{3-8} substituted cycloalkyls, aryls, substituted aryls, aralkyls, C_{1-6} heteroalkyls, substituted C_{1-6} heteroalkyls, C_{1-6} alkoxys, phenoxys and C_{1-6} heteroalkoxys;

p is a positive integer; and

with a nucleophile under conditions sufficient to form a compound of Formula (IIa):



(IIa)

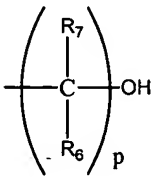
wherein:

R_8' is a nucleophile residue;

L_1 is a bifunctional linker

Y_{1-2} are independently O, S or NR_1;

Z_6 is a substituted or unsubstituted aromatic hydrocarbon or substituted or unsubstituted heterocyclic aromatic group, substituted with



; and

R_1, R_{6-7} and R_{20} are independently selected from the group consisting of hydrogen, C_{1-6} alkyls, C_{3-12} branched alkyls, C_{3-8} cycloalkyls, C_{1-6} substituted

alkyls, C_{3-8} substituted cycloalkyls, aryls, substituted aryls, aralkyls, C_{1-6} hetero-alkyls, substituted C_{1-6} heteroalkyls, C_{1-6} alkoxys, phenoxys and C_{1-6} hetero-alkoxys.